

**IN THE CLAIMS:**

1. (Currently Amended) A method for a gain control of a fiberoptic repeating system comprising:

mixing from a master repeater a modulated MODEM signal of a predetermined level with a RF signal and transmitting the mixed signal through an optical cable;

detecting at a slave repeater a modulated MODEM signal level from the mixed signal transmitted by the master repeater;

comparing, at the slave repeater, the detected modulated MODEM signal level with a reference level and obtaining a difference between the levels, wherein the reference level is a predetermined level unless the master repeater transmits a control signal of a base station; and

adjusting a gain of an amplifier for the RF signal in the slave repeater by using the obtained difference to calculate the gain adjustment.

2. (Original) A method of claim 1, wherein the modulated MODEM signal is detected by a controller of a slave repeater.

3. (Currently Cancelled)

4. (Previously Amended) A method of claim 1, wherein controlling the gain of the amplifier comprises increasing a level of the RF signal by the obtained difference.

5. (Currently Amended) A method for a fiberoptic repeating system comprising:

- transmitting from a base station a first RF signal;
- amplifying the first RF signal by a constant level through an amplifier of a master repeater;
- mixing a first modulated MODEM signal of a predetermined level with the first amplified RF signal and transmitting the mixed signal through an optical cable to a slave repeater;
- receiving and separating the mixed signal into a second modulated MODEM signal and a second RF signal, and detecting a modulated MODEM signal level from the second modulated MODEM signal;
- comparing, at the slave repeater, the detected modulated MODEM signal level with a reference level and obtaining a difference between the levels, wherein the reference level is the predetermined level unless the master repeater transmits a control signal of a base station;
- controlling a gain of an amplifier for the RF signal in the slave repeater based upon said obtained difference; and
- amplifying the second RF signal according to the controlled gain and transmitting the second amplified RF signal to terminal.

6. (Original) A method of claim 5, wherein the modulate MODEM signal level is detected by a controller of the slave reporter.

7. (Currently Cancelled)

8 (Previously Amended) A method of claim 5, wherein controlling the gain of the amplifier for the RF signal in the slave repeater comprises increasing a level of the second RF signal by the obtained difference.

9. (Currently Amended) A method of controlling gain in a fiberoptic communication system, comprising:

combining a monitoring signal of a predetermined level with an RF signal;

transmitting the combined monitoring and RF signals to a slave repeater;

separating the transmitted monitoring signal from the transmitted RF signal at the slave repeater;

comparing, at the slave repeater, a level of the transmitted monitoring signal with the predetermined level, wherein the monitoring signal of a predetermined level comprises a modulated MODEM signal; and

adjusting a gain applied to the transmitted RF signal by using the comparison to calculate the gain adjustment.

10. (Currently Cancelled)
11. (Previously Added) The method claim 9, wherein the transmitting step comprises:  
converting the combined monitoring and RF signals into an optical signal; and  
transmitting the optical signal to the slave repeater via an optical fiber.